

REMARKS

The pending Office Action addresses and rejects claims 1, 3, 4, 7-15, and 17-33.

At the outset, Applicants thanks Examiner Nguyen for extending the courtesy of a telephone interview on October 21, 2008 to Applicants' representative. During the interview, the Wallace reference was discussed, as well as possible amendments to the claims. Specifically, the Examiner agreed that Wallace does not teach a flexible membrane that is spray-coated onto a catheter, and does not teach a compliance of its flexible membrane.

Claim Amendments

Claims 1, 22, and 29 are amended to include the limitations of claims 7, 25, and 31, and in particular to recite that the flexible membrane has a compliance that is in the range of about 0.05 $\mu\text{L}/\text{mmHg}$ to 2 $\mu\text{L}/\text{mmHg}$. Claims 7, 25, and 31 are canceled. Claims 1, 22, and 29 are also amended to recite that the flexible membrane that is spray-coated across an opening formed in the catheter. Support for this amendment can be found, for example, in paragraph [0028] of the specification. No new matter is added.

Rejections Pursuant to 35 U.S.C. §103

(1) U.S. Patent No. 5,951,497 of Wallace et al. in view of U.S. Patent No. 4,928,693 of Goodin

Claims 1, 3, 4, 8-10, 15, 17, 18, 21-24, and 28-29 are rejected pursuant to 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 5,951,497 of Wallace et al. in view of U.S. Patent No. 4,928,693 of Goodin.

At the outset, it is unclear why the Examiner is maintaining this rejection when the Examiner admits that the combination of Wallace and Goodin does not teach all the features of the claims. Specifically, on page 10 of the Office Action, the Examiner states "Wallace et al and Goodin et al also do not explicitly disclose the pressure sensor is disposed across an open proximal end of the catheter." Thus, Applicants request this rejection be withdrawn.

Wallace does not teach or suggest a flexible membrane that is spray-coated across an opening formed in the catheter, as required by independent claims 1, 22, and 29. As explained in the previous response, Wallace is directed to a device for taking pressure measurements in the uterus that includes a balloon (342) on a catheter (310) that is inserted into the uterus and charged with air via a lumen (330) to a known pressure. There is no indication in Wallace of how the balloon (342) is formed on the device, and there is certainly no mention of using a spray-coating technique to place the balloon (342) on the exterior of the catheter (310). In fact, it would be impossible to form Wallace's balloon using a spray-coated technique. As shown in FIG. 16 of Wallace, the balloon (342) extends significantly beyond the actual opening formed in the catheter (310) and is able to inflate along its entire length. This structure would not be possible if the balloon (342) was spray-coated onto the catheter as the process of spray-coating would form a balloon that is substantially flush with and adhered to the side of the catheter and would only be able to flex or inflate at the actual location of the opening into the catheter. In addition, there is simply no need to spray-coat the balloon (342) as the catheter of Wallace, which is primarily used in the uterus, is significantly larger than an intra-ventricular catheter of the invention and thus would not need the increased accuracy that a spray-coated balloon would provide. The use of spray-coating allows the flexible membrane to have a very small compliance, thus allowing for increased sensitivity to small changes in pressure. Accordingly, Wallace does not teach this feature of the claims and Goodin does not remedy this deficiency of Wallace as Goodin likewise fails to teach or suggest spray-coating a flexible member across an opening of a catheter.

Wallace also does not teach or suggest a flexible membrane that has a compliance that is in the range of about 0.05 $\mu\text{L}/\text{mmHg}$ to 2 $\mu\text{L}/\text{mmHg}$, as required by independent claims 1, 22, and 29. Not only does Wallace not teach the claimed compliance range, but Wallace does not specify the compliance of the balloon (342) at all. Further, it is unlikely that the balloon (342) of Wallace would have a compliance in the claimed range due to its configuration as Wallace teaches a relatively large catheter as it is used in the uterus. The compliance values of the claimed invention were chosen to be low to increase the frequency response of the device in part due to the small size of an intra-ventricular catheter and the small environment in which it is used. This low compliance would not be necessary in a device the size of Wallace's device, which is used in the uterus and is significantly larger than an intra-

ventricular catheter. Thus, Wallace does not teach this feature of the claims and Goodin does not remedy this deficiency of Wallace as Goodin likewise fails to teach or suggest a flexible membrane that has a compliance that is in the range of about 0.05 $\mu\text{L}/\text{mmHg}$ to 2 $\mu\text{L}/\text{mmHg}$.

Claims 1, 22, and 29, as well as claims 3, 4, 8-10, 15, 17, 18, 21, 23, 24, and 28 which depend therefrom, therefore distinguish over Wallace and Goodin and represent allowable subject matter.

(2) Wallace in view of Goodin in further view of various additional references

Claims 7, 11-13, 19, 20, 25-27, and 31-33 are rejected pursuant to 35 U.S.C. §103(a) as being obvious over Wallace and Goodin in view of various references set forth in the Office Action. The Examiner relies on these references to teach various features recited in the dependent claims and not taught by Wallace and Goodin. As indicated above, the combination of Wallace and Goodin does not teach the claimed invention. The various secondary references cited by the Examiner do not remedy the deficiencies of Wallace and Goodin. Accordingly, claims 7, 11-13, 19, 20, 25-27, and 31-33 distinguish over Wallace, Goodin, and the various secondary references and represent allowable subject matter.

(3) Wallace in view of Goodin in further view of U.S. Patent No. 5,573,007 of Bobo, Sr.

Claims 1, 3, 4, 8-10, 15, 17, 18, 21-24, 28, and 29 are rejected pursuant to 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 5,951,497 of Wallace et al. in view of U.S. Patent No. 4,928,693 of Goodin and further in view of U.S. Patent No. 5,573,007 of Bobo Sr. The Examiner argues that Wallace and Goodin disclose the pressure sensor device substantially as claimed, except that Wallace and Goodin fail to teach a pressure sensor that is disposed across an open proximal end of the catheter. The Examiner argues that it would have been obvious it add this feature because it is “an effective configuration to measure the pressure through the fluid in the catheter.”

As explained above, Wallace and Goodin do not teach a flexible membrane that is spray-coated across an opening formed in the catheter or that the flexible membrane has a compliance that is in the range of about 0.05 $\mu\text{L}/\text{mmHg}$ to 2 $\mu\text{L}/\text{mmHg}$, as required by independent claims 1, 22, and 29. Bobo

does not remedy these deficiencies of Wallace and Goodin as Bobo also fails to teach or suggest these features of the claims.

Claims 1, 22, and 29, as well as claims 3, 4, 8-10, 15, 17, 18, 21, 23, 24, and 28 which depend therefrom, therefore distinguish over Wallace, Goodin, and Bobo and represent allowable subject matter.

(4) Wallace in view of Goodin in view of Bobo, Sr. in further view of various additional references

Claims 7, 11-14, 19, 20, 25-27, and 31-33 are rejected pursuant to 35 U.S.C. §103(a) as being obvious over Wallace and Goodin in view of various references set forth in the Office Action. The Examiner relies on these references to teach various features recited in the dependent claims and not taught by Wallace, Goodin, and Bobo. As indicated above, the combination of Wallace, Goodin, and Bobo does not teach the claimed invention. The various secondary references cited by the Examiner do not remedy the deficiencies of Wallace, Goodin, and Bobo. Accordingly, claims 7, 11-14, 19, 20, 25-27, and 31-33 distinguish over Wallace, Goodin, Bobo and the various secondary references and represent allowable subject matter.

Conclusion

Applicants submit that all pending claims are now in condition for allowance, and allowance thereof is respectfully requested. The Examiner is encouraged to telephone the undersigned attorney for Applicants if such communication is deemed to expedite prosecution of this application.

Dated: November 14, 2008

Respectfully submitted,

By Jaime L. Burke
Jaime L. Burke
Registration No.: 61,959
NUTTER MCCLENNEN & FISH LLP
World Trade Center West
155 Seaport Boulevard
Boston, Massachusetts 02210-2604
(617) 439-2888
(617) 310-9888 (Fax)
Agent for Applicant